

ABSTRACT

A mouthguard to protect an arch of a user includes an outer wall covering a buccal surface of teeth. The outer wall includes a force absorbing inner layer, a force absorbing outer layer and a force transmitting layer positioned therebetween the force absorbing inner layer and the force absorbing outer layer. An inner wall is positioned opposite the outer wall to cover a palatal surface of the teeth, and includes the force absorbing inner layer and the force absorbing outer layer. A lower wall is disposed between the outer wall and the inner wall to cover an occlusal surface of the teeth. The lower wall includes the force absorbing inner layer and the force absorbing outer layer. The outer wall, inner wall and lower wall form a U-shaped channel that is molded into the shape of the arch. The method of making the mouthguard includes the steps of casting a model of a user's arch, molding a force absorbing inner layer of material to the model to form a force absorbing inner layer of the mouthguard. The method also includes the steps of molding a force-transmitting layer of material over the force absorbing inner layer in a predetermined position, and molding a force absorbing outer layer of material over the force absorbing inner layer and force transmitting layer. The method further includes the steps of finishing the mouthguard to conform to the arch of the user.